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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/926,367 | 06/13/2002 | Christian Marzolin | 215140US0PCT | 9256 |

22850 7590 12/29/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

CHEVALIER, ALICIA ANN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1772

DATE MAILED: 12/29/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/926,367

Applicant(s)

MARZOLIN ET AL.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 19-26 and 32-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-60 are pending in the application, claims 19-26 and 32-650 are withdrawn from consideration due to Applicant's election, in paper #13 filed October 10, 2003 in response to the restriction in paper #11 mailed August 21, 2003.
2. Amendments to claims in paper #6, filed on June 13, 2003, have been entered in the above-identified application.

Election/Restrictions

3. Applicant's election with traverse of Group I, claims 1-18 and 27-31 in Paper No. 13 is acknowledged. The traversal is on the ground(s) that the restriction is improper. This is not found persuasive because the present application was filed on the national stage under 35 USC 371 ^{and the} ~~The~~ propriety of a restriction requirement of "unity of invention" is evaluated by the criterion stated in PCT Rule 13 (or, alternatively, in 37 CFR 1.475(a)), namely, unity of invention exists between multiple inventions only when these inventions share one or more "special technical features" in common with the understanding that these special technical features define a contribution which each of the inventions makes over the prior art. Since COX et al. (US Patent No 5,575,878) and Azzopardi et al. (French Patent No. 2,756,276) disclose the special technical features of instant claim 1, the special technical features of claim 1 do not define a contribution over the prior art and thus restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claims 19-26 and 32-60 are withdrawn as per-elected.

Art Unit: 1772

Specification

4. The disclosure is objected to because of the following informalities: the specification lacks section headings.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather

Art Unit: 1772

than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 101

5. Claims 28-31 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Specifically, claims 28-31 provide for the use of, "application of," a glazing, but, do not set forth any steps involved in the method/process.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

Art Unit: 1772

international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-18 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Azzopardi et al. (French Patent No. 2,756,276). For purposes of discussion the English equivalent U.S. Patent No. 6,299,981 is used as the English translation of French Patent No. 2,756,276.

Regarding Applicant's claims 1 and 27, Azzopardi '981 discloses and anti-rain glazing (*col. 4, line 6*) comprising a substrate on which irregularities of submicron size have been formed (*col. 2, lines 21-25*). The irregularities form a bumps-and-hollows relief on the substrate (*col. 2, lines 34-35*), which reads on Applicant's "relief defines a low surface level and a high surface level." The irregularities have sizes falling into at least two different classes, the respective values of which vary by a factor of at least 5 or of a most 1/5 (*col. 2, lines 21-25*), which reads on Applicant's limitation "said low surface and said high surface level separated by a height not less than 1/10 of the dimensions of plurality of motifs forming said high level. Azzopardi '981's bumps of the irregularities reads on Applicant's "plurality of motifs forming said high level." Since Azzopardi '981 discloses that irregularities are applied to the entire surface of the substrate by dipping the substrate into the agent that forms the irregularities (*col. 4, line 66 through col. 5, line 3*) and the bumps of the irregularities are present (*col. 4, lines 6-8*), the relief is considered to have the high surface level representing at least 1% of the substrate surface.

Regarding Applicant's claims 2 and 3, Azzopardi '981 discloses that the substrate either has hydrophobicity/oleophobicity or hyrophilicity/oleophilicity properties (*col. 1, lines 8-9*). The

Art Unit: 1772

further comprises an agent of a silicone, such as SiO_2 (*col. 3, lines 46-50*) or the formula in column 3, lines 60-67.

Regarding Applicant's claim 4, Azzopardi '981 discloses that the irregularities preferably do not exceed 150 nm (*col. 2, lines 30-33*), which is equivalent to 0.15 micrometers and within Applicant's claimed range of "between 0.01 and 10 micrometers."

Regarding Applicant's claims 5 and 6, Azzopardi '981 discloses that the irregularities may have a single orientation, periodicity, or have many orientations, non-periodicity (*col. 2, lines 49-56*).

Regarding Applicant's claim 7, Azzopardi '981 discloses that the irregularities have space between two protuberances/bumps or hollow (*col. 2, lines 45-48*). The space read on Applicant's "at least one partition."

Regarding Applicant's claims 8 and 10, Azzopardi '981 discloses that the bumps, high surface level, may have a single orientation or many orientations on the substrate (*col. 2, lines 54-56*), which reads on "a continuity in at least one direction of plane of the substrate" and "does not display continuity in any direction."

Regarding Applicant's claim 9, Azzopardi '981 discloses the irregularities comprise a multiplicity of approximately identical parallelepipedal objects, such as polyhedras, which are parallel and uniformly spaced (*col. 2, lines 40-56*).

Regarding Applicant's claims 11-14, Azzopardi '981 discloses that the hollow, creators, may have cylindrical hollows uniformly distributed on the substrate (*col. 2, lines 40-56*), which are considered to have a multiplicity of axes of the hollows approximately perpendicular to a

Art Unit: 1772

plane of the substrate. The irregularities may be identical or different objects (*col. 2, lines 49-56*).

Regarding Applicant's claim 15, Azzopardi '981 discloses that the relief is comprises TiO_2 , a compound based on Ti, on a plastic substrate (*col. 3, lines 8-22*). The Applicant's limitation "said compound optionally hardened by means of application of an energy source, or a thermoplastic, and wherein at least one underlying portion of the substrate is composed of a glass a plastic or combination thereof," is an optional limitation that need not be present to anticipate the claim.

Regarding Applicant's claims 16-18, Azzopardi '981 discloses that the substrate is a conductor (*col. 3, lines 8-12*), has anti-reflecting properties, i.e. diffuses light (*col. 2, lines 32-33*), and anti-staining properties (*col. 1, lines 10*).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McGuire et al. (US Patent No. 5,965,235) discloses a similar sheet having hydrophobicity/oleophobicity or hydrophilicity/oleophilicity properties.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

Art Unit: 1772


If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0651.

ac

12/24/03

A handwritten signature in black ink, consisting of a stylized 'A' followed by a loop and a long horizontal stroke.


SANDRA M. NOLAN
PRIMARY EXAMINER